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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,627

07/24/2003

Shinichi Yatsuzuka

01-450

9051

23400 7590 04/20/2005

POSZ LAW GROUP, PLC  
12040 SOUTH LAKES DRIVE  
SUITE 101  
RESTON, VA 20191

EXAMINER

COMAS, YAHVEH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/625,627

Applicant(s)

YATSUZUKA ET AL.

Examiner

Yahveh Comas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/24/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yatsuzuka et al. U.S. Patent No. 6,138,459.

Yatsuzuka discloses a plurality of teeth (130) circumferentially disposed to surround a space; a yoke (133) disposed around the teeth and magnetically connected to the teeth (130), a plurality of coils (131 and 132) mounted on the teeth, and a movable core disposed in the space opposite the teeth to reciprocate transversely to the teeth, said movable core (120) having a plurality of first permanent magnets (122) at axially opposite ends for supplying magnetic flux to the teeth; wherein said movable core comprises means for suppressing generation (123) of a magnetic field disposed to magnetically separate the permanent magnets (122). Also a pair of permanent magnets respectively disposed on the opposite sides of the shielding means in the axial direction. A movable core further comprising a plurality of magnetic inductors (124), wherein said first permanent magnets (122) are disposed around a center of a plane that is perpendicular to the reciprocating direction of said movable core and polarized in directions perpendicular to the reciprocating direction, and said magnetic inductors (124) are disposed between said first permanent magnets in the direction perpendicular

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to the reciprocating direction, and wherein a center line (L1) of each said first permanent magnet in a radial direction inclines to a center line (L2) of the teeth (see fig 9).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yatsuzuka et al. U.S. Patent No. 6,138,459 in view of Yarr et al. U.S. Patent No. 5,389,844.

Yatsuzuka discloses the claimed invention except for wherein said first magnets project from said inductors to be located between the adjacent teeth, said coils connected to an ac power source to reciprocate said movable core or to generate electric power. However Yarr discloses a linear machine having extended magnets

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between the stator teeth in order to provide a linear alternators/motors with and reduce the size, cost and weight of the alternator/motor.

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify Yatsuzuka's invention and provide linear electrodynamic machine working as a motor connected to an ac power source or a generator having magnets projections located between the adjacent teeth since that would been desirable for reduce the size, cost and weight of said alternator/motor.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yatsuzuka et al. U.S. Patent No. 6,138,459 in view of Hazelton U.S. Patent No. 6,313,551.

Yatsuzuka disclose the claimed invention except for said magnetic shield comprising a second permanent magnet that opposite polarity to the first permanent magnets. However, Hazelton discloses a shaft made of a first permanent magnets (40) and a second permanent magnet (42) that opposite polarity to the first permanent magnets in order to improved the flux density.

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify Yatsuzuka's invention and provide a shaft having a magnetic shield comprising a second permanent magnet that opposite polarity to the first permanent magnets in order to improved the flux density.

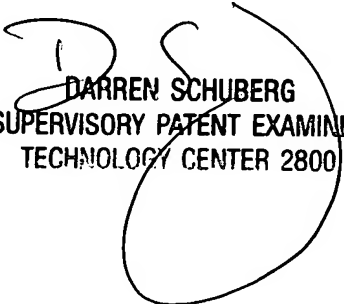
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yahveh Comas whose telephone number is (571) 272-2020. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YC

  
DARREN SCHUBERG  
SUPERVISORY PATENT EXAMINER  
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